CLAIMS:

1.   A method comprising:

obtaining a white point correction for a display device;

5   obtaining a chromatic correction for the display device; and

generating corrected color coordinates based on the white point and chromatic

corrections.

2.   The method of claim 1, further comprising:

10   obtaining the white point correction by determining a white point correction

matrix; and

obtaining the chromatic correction by determining a chromatic correction matrix.

3.   The method of claim 2, wherein determining a white point correction matrix

15   comprises:

displaying a color on a display device, the color being defined by an original

white point matrix in a D50 illuminant condition; and

adjusting at least some white point matrix values so that visual appearance on the

display device is visually equivalent to a print.

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4.   The method of claim 3, wherein adjusting at least some white point matrix values

comprises adjusting maximum phosphor settings on a display.

5.   The method of claim 2, wherein determining a chromatic correction matrix

25   comprises:

displaying a color on a display device, the color being defined by an original

chromatic matrix in a D50 illuminant condition; and

adjusting at least some chromatic matrix values so that visual appearance on the

display device is visually equivalent to a print.

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6.   The method of claim 5, wherein adjusting at least some chromatic matrix values comprises adjusting chromaticity values in an RGB color space.

7.   The method of claim 6, wherein adjusting chromaticity values in an RGB color

5   space comprises adjusting chromaticity values in an AdobeRGB(d50) color space.

8.   The method of claim 1 wherein generating corrected color coordinates based on the white point and chromatic corrections comprises generating a single correction matrix.

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9.   A method comprising:

determining device-independent coordinates defining a color on a hard copy; and

generating corrected coordinates using the device-independent coordinates, a

white point correction and a chromatic correction.

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10.   The method of claim 9, further comprising displaying the color using the corrected coordinates.

11.   The method of claim 10, wherein the displayed color is visually equivalent to the

20   color on the hard copy.

12.   The method of claim 9, wherein the white point correction is a white point correction matrix and the chromatic correction is a chromatic correction matrix.

25   13.   The method of claim 12, further comprising determining the white point correction matrix and the chromatic correction matrix.

14.   The method of claim 13, wherein determining the white point correction matrix comprises:

30   displaying a color on a display device, the color being defined by an original white point matrix in a D50 illuminant condition; and

adjusting at least some white point matrix values so that visual appearance on the display device is visually equivalent to a white printout viewed in the D50 illuminant condition.

5   15.   The method of claim 13, wherein determining the chromatic correction matrix comprises:

displaying a color on a display device, the color being defined by an original chromatic matrix in a D50 illuminant condition; and

adjusting at least some chromatic matrix values so that visual appearance on the

10   display device is visually equivalent to a color printout viewed in the D50 illuminant condition.

16.   A method comprising:

converting device-dependent coordinates that define a color in a printing device to

15   device-independent coordinates;

adjusting the device-independent coordinates using a white point correction and a chromatic correction; and

converting the corrected device-independent coordinates to device-dependent coordinates that define a color in a display device.

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17.   The method of claim 16, further comprising displaying the color using the corrected coordinates.

18.   The method of claim 17, wherein the displayed color is visually equivalent to the

25   color on the hard copy.

19.   The method of claim 16, wherein the white point correction is a white point correction matrix and the chromatic correction is a chromatic correction matrix.

30   20.   The method of claim 19, further comprising determining the white point correction matrix and the chromatic correction matrix.

21. The method of claim 20, wherein determining a white point correction matrix comprises:

    displaying a color on a display device, the color being defined by an original white point matrix in a D50 illuminant condition; and

    adjusting at least some white point matrix values so that visual appearance on the display device is visually equivalent to a print.

22. The method of claim 20, wherein determining a chromatic correction matrix comprises:

    displaying a color on a display device, the color being defined by an original chromatic matrix in a D50 illuminant condition; and

    adjusting at least some chromatic matrix values so that visual appearance on the display device is visually equivalent to a print.

23. A method comprising:

    adjusting maximum phosphor values for a display device so that a first color displayed on the display device matches white in a defined illuminant condition for a hard copy; and

    adjusting color settings so that a second color displayed on the display device matches a defined color in the defined illuminant condition.

24. The method of claim 23, wherein the defined illuminant condition is a D50 illuminant condition.

25. The method of claim 23, wherein adjusting color settings comprises adjusting color settings within a computer program.

26. The method of claim 23, wherein adjusting color settings comprises adjusting chromaticity values in an RGB color space.

27.   The method of claim 25, wherein adjusting chromaticity values in an RGB color space comprises adjusting chromaticity values in an AdobeRGB(50) color space.

28.   A method comprising:

5   creating a first visual representation of an image on a hard copy; and

creating a second visual representation of the image on a display device, wherein the first visual representation and the second visual representation have different device-independent coordinates, and

wherein both white point and saturated colors on the display device are a good

10   visual match to those of the hard copy.

29.   The method of claim 28, wherein the both white point and saturated colors on the display are visually equivalent to those of the hard copy.

15   30.   A system comprising:

a display device;

a memory device; and

a processor coupled to the memory device and the display, wherein the processor:

obtains a white point correction for the display device from the memory

20   device;

obtains a chromatic correction for the display device from the memory device; and

generates corrected color coordinates for the display device based on the white point and chromatic corrections.

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31.   A system comprising:

a display device;

a memory device; and

a processor coupled to the display device and the memory device, wherein the

30   processor:

adjusts the maximum phosphor values of the display device so that a first color displayed on the display device matches white in a defined illuminant condition for a hard copy; and

adjusts color settings so that a second color displayed on the display

5   device matches a defined color in the defined illuminant condition.

32.   The system of claim 31, wherein the define illuminant condition is a D50 illuminant condition.

10   33.   The system of claim 31, wherein adjusting color settings comprises adjusting chromaticity values in an RGB color space.

34.   The system of claim 31, wherein adjusting chromaticity values in an RGB color space comprises adjusting chromaticity values in an AdobeRGB(50) color space.

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35   A system comprising:

a display device;

a memory device; and

a processor coupled to the display device and the memory device, wherein the

20   processor:

receives a first set of image data from the memory device defining a first visual representation of an image on a hard copy;

creates a second set of image data defining a second visual representation of the image for display on the display device; and

25   displays the image on the display;

wherein the first set of image data and second set of image data have different device-independent coordinates, and

wherein both white point and saturated colors of the image on the display are a good visual match to those of the hard copy.

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36.   The system of claim 35, wherein both white point and saturated colors of the image on the display are visually equivalent to those of the hard copy.

37.   A computer readable medium carrying program code that when executed:

5   receives a white point correction for a display device as input;

receives a chromatic correction for the display device as input; and

generates corrected color coordinates for the display device based on the white point and chromatic corrections.

10   38.   A computer readable medium carrying program code that when executed:

adjusts maximum phosphor values of a display device so that a first color displayed on the display device matches white in a defined illuminant condition for a hard copy; and

adjusts color settings so that a second color displayed on the display

15   device matches a defined color in the defined illuminant condition.

39.   The computer readable medium of claim 38, wherein the define illuminant condition is a D50 illuminant condition.

20   40.   The computer readable medium of claim 38, wherein adjusting color settings comprises adjusting chromaticity values in an RGB color space.

41.   A computer readable medium carrying program code that when executed:

receives a first set of image data from the memory device defining a first visual

25   representation of an image on a hard copy;

creates a second set of image data defining a second visual representation of the image for display on the display device; and

displays the image on the display;

wherein the first set of image data and second set of image data have different

30   device-independent coordinates, and

wherein both white point and saturated colors of the image on the display are a good visual match to those of the hard copy.

42.   The computer readable medium of claim 41, wherein both white point and saturated colors of the image on the display are visually equivalent to those of the hard copy.

43.   A computer readable medium carrying a color profile data structure thereon, the color profile data structure corresponding to a first device and including illuminant condition values that do not correspond to actual illuminant conditions associated with the first device, wherein an image rendered on a second device using the color profile data structure is visually equivalent to the image rendered on the first device.